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Trainee Teachers' Attitudes Towards Students With Specific Learning Disabilities

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Abstract: Policies on the inclusion of students with special educational needs in mainstream classrooms have focused attention on how general education teachers perceive these students. Furthermore with specific learning disabilities forming a large group of diverse students, and teachers' attitudes often not changing over the career span, preparing teachers for inclusive education is vitally important. This study aimed to identify the attitudes of trainee teachers towards students with specific learning disabilities and differentiation of the curriculum. Significant differences were found between the attitudes of primary and secondary school trainee teachers, and the influence of training. There were no differences in attitudes according to experience with students with specific learning disabilities. The findings have implications for teacher training programs

Introduction

Recent moves towards the inclusion of students with special educational needs in inclusive classrooms have focused attention on how teachers perceive these students, what constitutes educational success for children with special educational needs in inclusive classrooms, and the ability of teachers to provide effective instruction for them. Limitations in funding and appropriate material resources and support add to the difficulties faced by teachers. These issues foreground a need to understand the beliefs and attitudes that teachers hold about their role as practitioners generally and in relation to students in their classrooms who have difficulty learning.

Teachers' past experiences as learners are powerful in shaping conceptions and expectations about teaching students, and form beliefs about the process of teaching during their preservice training, and once a belief has been held for a long time it becomes difficult to change (Woolfolk-Hoy & Spero, 2005). Preservice training is a critical period during which beliefs and attitudes are more likely to be influenced by external sources. Consequently, there is a critical need to explore trainee teachers' perceptions and attitudes in relation to students with specific learning disabilities (SLD). This study aimed to provide an in-depth exploration of trainee, primary and secondary teachers' attitudes about students with SLD.

Literature Review

As inclusive education continues to gain strength, it is important to understand how educators perceive the academic outcomes of students with diverse needs and abilities (Hemmings & Woodcock, 2011). Students with SLD form the largest group of students with

diverse needs and abilities in inclusive classrooms (Clark & Artiles, 2000). Specific learning disability is defined as a neurological disorder that is manifested by “significant difficulties in acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical skills...intrinsic to the individual, presumed to be due to central nervous system dysfunction, and may occur the life span” (NJCD, 1998, p. 1).

A significant influence on students’ classroom performance is teacher attitudes, (Forlin, Loreman, Sharma & Earle, 2007; Winter, 2006). For example, research has shown that negative attitudes can lead to low expectations of a person (Campbell, Gilmore & Cuskelly, 2003; Palmer, 2006). On the other hand, positive attitudes can lead to higher expectations of a person (Angelides, 2008).

The influence of teacher attitudes is powerful. For example, negative attitudes and low expectations by teachers can result in reduced opportunities for students to learn. This, in turn, may impair students’ self-beliefs causing them to reduce their expectations and leading to a deficit cycle (Westwood, 1995). However, positive attitudes can enhance opportunities for students to learn, which may improve their performances, self-expectations and self-esteem (Palmer, 2006; Woolfson, Grant & Campbell, 2007). Therefore in order for inclusion to be successful (particularly for those with SLD), it is critical that teachers have positive attitudes towards students (Angelidis, 2008; Winter, 2006).

Factors Influencing Teachers’ and Trainee Teachers’ Attitudes towards Students with Special Educational Needs

Over the past few decades the notion of inclusion has gained more momentum and the majority of classrooms now include students with diverse needs and abilities. When inclusion (previously termed as ‘mainstreaming’) was more sporadic and was beginning to gain momentum, teachers’ attitudes towards students with diverse needs and abilities (at the time described as disabilities) were not very positive (Siegel, 1992). Teachers were very apprehensive about these students and the quality of work that they were capable of producing. In particular, empirical data by Aloia, Maxwell and Aloia (1981) showed that teachers possessed low academic expectations in relation to students with special educational needs. They were also concerned about their lack of knowledge and training for the inclusion of students with disabilities (Siegel & Jausovec, 1994).

However, more recently, studies have suggested that there has been a move towards more positive attitudes for students with diverse needs and abilities. For example, a study by Fields (2006) surveyed general education teachers enrolled in an in-service course in special education at a regional university in Queensland. The teachers in the study were presented with 14 case study descriptions of students with varying characteristics, behaviours and special needs in the form of vignettes. They were asked questions in response to the vignettes presented. Part of the results indicated that teachers were more hostile towards including students with behavioural disorders than those who are gifted and talented or have communication disorders. The study is consistent with previous studies (such as Soodak, Podell & Lehman, 1998) which found that teachers had more positive attitudes towards students with social and physical disabilities than academic or behavioural. Avramidis and Norwich (2002) reviewed a large body of research which explored a host of possible factors that impact upon teacher attitude and acceptance of inclusion between 1984 and 2000. Their findings revealed that teachers’ attitudes towards students with disabilities in inclusive settings have become more positive over recent years. More specifically, they found that not only were teachers more receptive to including students with sensory and physical impairments than those with SLD but that general education teachers were less encouraging,

showed less tolerance and understanding towards students with SLD than did special educators. Avramidis and Norwich concluded from their study that there is an inconsistency in regards to positive attitude towards full inclusion for students with disabilities (2002). These results have since been supported by Lancaster and Bain (2007), and Romi and Leyser (2006).

Further research exists supporting the notion that teachers have preferences when accepting students with different types of disabilities (Avramidis & Norwich, 2002). For example, Loreman and colleagues (2005) found that teachers were mixed in their attitudes towards students with diverse needs and abilities with the least positive response towards students with behaviour, and particularly physically aggressive behaviour problems. Moreover, Alghazo and Gaad (2004), and Englebrecht and colleagues (2003), concluded from their studies that teachers found students with an intellectual disability as being more difficult to support than students with other types of disabilities. Dupoux, Wolman and Estrada (2005) compared the attitudes of teachers toward inclusion of students with diverse needs and abilities in Haïti and the United States. One hundred-fifty-two high school teachers in Haïti and 216 high school teachers in the United States completed the Opinions Relative to the Integration of Students with Disabilities Scale (Antonak & Larrivee, 1995). The researchers concluded that teachers in both countries created a hierarchy of attitudes when accommodating the severity of disabilities. They found that students with SLD engendered the most positive attitudes towards accommodating their needs while those with emotional and behavioural difficulties caused the least positive attitudes towards accommodating their needs. Avramidis, Bayliss and Burden (2000) found that while the majority of teachers agreed with the inclusion policy, most were only willing to accept the inclusion of students with mild disabilities. As DeSimone and Parmar (2006) have stated, research thus far has shown that elementary and middle school teachers generally do not feel responsible for differentiating instruction to meet diverse learning needs. Thus the research suggests that modifying and differentiating instruction is not a skill that comes easily for any teacher (novice or experienced).

Attitude and Instruction

The relationship between teacher attitude, and behaviour and instructional practice has become more evident in recent research (Woolfson et al., 2007). Woolfson and colleagues (2007) claimed that the connection between teacher beliefs and their behaviours in the classroom are linked to personally-based beliefs, values and principles. Studies by the European Agency for Development in Special Needs Education (2003) and Leung and Liu (2003) have demonstrated that pedagogy is affected by teacher attitudes. Research has also shown correlations between negative attitudes and poor or ineffective instructional strategies (Avramidis & Norwich, 2002; Palmer, 2006). Biddle (2006) investigated the types of instructional strategies that general education teachers used in inclusive classrooms. Eighty-nine general education teachers (teaching Years 9-12) completed a self-evaluation of instructional strategies they used in their inclusive classrooms and their attitudes towards inclusion of students with diverse needs and abilities. Biddle found that teachers who were more positive in their attitude towards inclusion of such students utilised effective instructional strategies more consistently than those teachers who had a more negative attitude. Moreover, the more exposure and experience teachers had with students with disabilities, the more positive their attitude towards them (Lambe & Bones, 2006). Similar results were found by Hastings and colleagues (1996) in research with trainee teachers.

Research demonstrates that increased experience and contact with students with special educational needs in conjunction with knowledge and training, results in more positive attitudes (Akiba, 2011; Lambe & Bones, 2006; Sharma, Forlin, Loreman & Earle, 2006; Winter, 2006). Moreover, research has shown that teachers' negative attitudes towards students with special educational needs are a function of lack of training and development and, teachers with more training about students with special educational needs should have more favourable attitudes and emotional reactions towards them (Avramidis et al., 2000; Carroll, Forlin & Jobling, 2003; Mungai & Thornburg, 2002).

Teacher education programs are criticised for doing too little to prepare trainee teachers to work with children with special educational needs. However, research has found that attempts to improve trainee teachers' attitudes only had a small impact (Brown, Walsh, Hill & Cipko, 2008; Forlin et al., 2007; Tait & Purdie, 2000).

Winter (2006) asked 203 teachers in Northern Ireland about their professional training in preparing them to meet the challenges of inclusive education. Winter found that 89% did not feel their training had prepared them. DeSimone and Parmar (2006) conducted a study in 19 states across the United States and concluded that respondents (75%) were not prepared enough to meet the needs of their students with special educational needs. These findings are consistent with findings from Bradshaw and Mundia (2006), and, Subban and Sharma (2006), which show that the majority of their respondents claimed that their preservice teacher training programs did not equip them with the necessary skills to face the challenges and difficulties of teaching students with SLD.

Moreover, researchers have also concluded that special education courses have little (if any) impact on changing perceptions and attitudes towards students with special educational needs (Brown et al., 2008; Stella, Forlin & Lan, 2007). For example, Stella, Forlin and Lan (2007) studied 213 trainee teachers in Hong Kong who completed pre- and post-surveys on a compulsory special education module. This was to compare their attitudes and concerns towards inclusive education. They found that although the results were significant, the differences in attitudes and concerns from completing the compulsory special education module were not substantial. This supported earlier research by Forlin and colleagues (1999) who had previously found that those trainee teachers who had taken an elective subject in special education as part of their course indicated less discomfort and more positive attitudes than those who had not done so. However, Forlin and colleagues found that compulsory special education subjects had minimal impact upon influencing trainee teachers' attitudes and beliefs (1999). Conversely, Ellins and Porter (2005) found that training in special education was found to enhance the formation of positive attitudes.

Additionally, it has been claimed that trainee teachers' pre-existing beliefs and past school experiences are powerful in shaping conceptions about teaching diverse students and are unlikely to change over time (Woolfolk-Hoy & Spero, 2005). This reinforces the importance of preservice teacher training although some research suggests these do not change trainee teachers' preconceptions about teaching students with diverse needs and abilities (Bradshaw & Mundia, 2006; Subban & Sharma, 2006).

Attitudes toward Students with SLD

Although there is limited research on teachers' attitudes towards students with SLD, it suggests teachers do not always respond positively to students with SLD within inclusive classrooms (Tait & Purdie, 2000). DeSimone and Parmar (2006) examined teacher beliefs where 228 Year six, seven and eight mathematics teachers completed the 'Survey on Teaching Mathematics to Students with [Specific] Learning Disabilities' across 19 states in

the United States. They followed this up with telephone interviews from 26 of the respondents who completed the survey. One of their striking, yet disappointing, findings was that the majority of respondents did not see any distinction between a student with SLD and a low-performing student. Consequently, the respondents believed that the modifications that they used for low-achieving students were adequate and sufficient for students with SLD (DeSimone & Parmar, 2006).

DeSimone and Parmar's study supports previous work, such as that of Siperstein and Goding (1985) who concluded that there is a strong misconception of students with SLD among teachers. They hypothesised from this that teachers have low expectations of children with SLD. This can in turn manifest into teachers' different treatment of children with SLD. Siperstein and Goding (1985) contended that teachers' responses to children with SLD were triggered more by the label that they wore than their actual behaviour.

In summary, research demonstrates that the attitudes of teachers are to some extent influenced by the amount of training and knowledge they have received (Burke & Sutherland, 2004; Winter, 2006), although often limited). However, researchers have concluded that the most important factors on teachers' attitudes were exposure and experience with students with special educational needs (Akiba, 2011; Brown et al., 2008; Lambe & Bones, 2006). Specific research questions for this study were:

- i. What are the similarities and significant differences in regards to attitudes towards students with SLD and differentiating the curriculum to meet their needs between:
 - a. primary and secondary trainee teachers;
 - b. trainee teachers at the beginning and end of their training course;
 - c. male and female trainee teachers; and,
 - d. experience and exposure to students with SLD?

Methodology

This study examined trainee teachers' attitudes towards students with SLD, and to what extent they differed according to school context, gender, training, and experience with those with SLD.

Participants

The participants in this study were trainee teachers drawn from three varied universities across New South Wales, including urban, suburban, and rural areas. Respondents were undertaking a one year diploma of education in either primary education (n=494) or secondary education (n=158). Of the 652 participants, 22% were male and 78% were female trainee teachers, a similar ratio to that of male and female primary/secondary teachers in Australia (Anderson, 2004; Callan, 2004). Participants were either near the beginning (n=275) or near the end (n=377) of their training course. In the one year training course, trainee teachers commence their teaching program after the completion of a general undergraduate degree course.

Context

In the one year, trainee teachers across the varied universities spend an initial two-three weeks in schools at the beginning of their course, and then a four-five week block at the

end of each of the two semesters. The aim of the initial two-three week placement in schools is to observe and gain an initial understanding of how schools and classrooms run. The four-five week placement at the end of the first semester is spent observing teaching, team teaching, teaching parts of lessons to teaching whole class lessons. The final four-five week placement is similar to the previous one, but extended in that trainee teachers are also expected to teach complete units of work to a whole class, including assessments.

The structures of the programs at each university seek to engage students in professional aspects of teaching, including curriculum methods and classroom practice. Of the number of subjects offered to trainee teachers, all must complete a subject around inclusive education which focuses on the teaching and meeting the needs of learners with diverse educational needs, and an emphasis on effective teaching and classroom management strategies. The compulsory inclusive education subjects offered to the different cohorts of trainee teachers are similar in content across the varied universities.

Instrumentation

A survey questionnaire was used to gather the data for this study. The instrument consisted of a number of parts and used a variety of question formats. However, for this part of the study this paper is only going to focus on the part of attitudes towards students with SLD. The attitudes questionnaire used Likert-scale questions. Even though the main focus of this article is the analysis of the Likert-scale responses, it needs to be emphasised that other sections of the survey questionnaire were used in a more extensive project relating to trainee teacher views and understanding towards students with SLD.

The Likert-scale items in the survey were drawn from the National Research Centre for the Gifted and Talented (NRCGT) as part of the 'Survey of Practices' (SOP) instrument. The SOP was created to assess the attitudes and beliefs about academically diverse learners and differentiated instruction appropriate for meeting their needs. It assessed attitudes towards gifted learners, SLD learners and issues related to the differentiation of classroom strategies to meet the needs of academically diverse learners (Tomlinson, Callahan, Moon, Tomchin, Landrum, Imbeau, Hunsaker, & Eiss, 1995).

The scale used for this study included 15 items e.g., "*Students with SLD find it difficult to work on their own without teacher direction*". Each item requires a response to a 5-point Likert-type classification with response choices ranging from 0 (strongly agree), to 4 (strongly disagree). Some statements were written positively whereas others were stated negatively. Those responses to negatively written statements were reverse-coded prior to analysis so that all statement scores were consistent. Thus, the higher the respondent's score, the more positive was the attitude of the trainee teacher. As noted by Tomlinson et al. (1995), the scale also produced scores on two factors, namely, attitudes towards students with SLD; and, attitudes towards differentiating the curriculum. Tomlinson et al. (1995) have reported on the adequacy of the scale and its constituent factors.

In the current study, through the use of a principal components extraction and varimax rotation, factor analysis, it was revealed that two factors could be identified. The two factors were consistent with the Tomlinson et al. (1995) factors and were labelled accordingly. The sub-scales were adequate in terms of their internal consistency with Cronbach's alpha results in the acceptable range (i.e., >.7).

Procedure

The instrument was piloted and socially validated with 40 trainee teachers. Minor revisions were made to the instrument in response to the pilot study. In the present study, all 652 participants were surveyed either in the first few weeks of the course commencing, or, in the final week of the final semester (just before exams). Participants were approached at the end of a lecture and the surveys were distributed by colleagues of the researcher. Ethics approval was obtained by the relevant university committee.

Results

Multivariate analyses of variance (MANOVAs) were conducted to examine trainee teachers' attitudes towards those with SLD and differentiating the curriculum. The MANOVAs determined whether school context, gender, training, or experience with students with SLD affected attitudes. MANOVA results are presented in Table 1. The effect sizes used and measured in this paper reflect upon Cohen's suggested small, medium, and large effect sizes where η_p^2 sizes are equal to 0.10, 0.25, and 0.40, respectively (Cohen, 1969, cited in Richardson, 2011).

Comparison	Group	Analysis	Variables	Sig.	η_p^2
Training to teach:	Scale Variables	Multivariate Test		.000*	.252
Primary: <i>n</i> = 494	Secondary: <i>n</i> = 158	Between Subjects	SLD Att	.000*	.158
			Diff Att	.000*	.188
Gender	Scale Variables	Multivariate Test		.000*	.135
Male: <i>n</i> = 143	Female: <i>n</i> = 509	Between Subjects	SLD Att	.038	.015
			Diff Att	.015	.025
Training.	Scale Variables	Multivariate Test		.000*	.219
End: <i>n</i> = 377	Beginning: <i>n</i> = 275	Between Subjects	SLD Att	.017	.030
			Diff Att	.000*	.164
SLD Exp	Scale Variables	Multivariate Test		.242	.196
None: <i>n</i> = 169	Experience: <i>n</i> = 483	Between Subject	SLD Att	.995	.000
			Diff Att	.366	.009

* = Significant at the <.001 level

Table 1: Significant Comparisons of Attitudes Towards Students with SLD and Differentiating the Curriculum

As Table 1 shows, there were significant differences (small-medium effect size) between primary and secondary trainee teachers concerning their attitudes towards students with SLD, $F(1, 652) = 54.879$, $p < .001$, $\eta_p^2 = .158$. Primary school trainee teachers had a higher positive attitude ($M = 2.92$) towards students with SLD than their secondary counterparts ($M = 2.52$). More specifically, the MANOVA test on the individual SLD attitude statements shows that statements 1 ($F(1, 652) = 57.134$, $p < .001$, $\eta_p^2 = .165$) and 9 ($F(1, 652) = 58.514$, $p < .001$, $\eta_p^2 = .167$) resulted in significant differences (small-medium

effect sizes) between primary and secondary trainee teachers. Both statements refer to students with SLD usually being low achievers, and not doing well in most subjects (statements 1 and 9 respectively). Primary trainee teachers had a higher positive belief that students with SLD are not usually low achievers ($M = 2.97$) and can do well in most subjects ($M = 2.48$) than their secondary counterparts ($M = 2.49$ & $M = 1.97$ respectively).

Significant differences (small-medium effect sizes) were also found between primary and secondary trainee teachers in their attitudes towards curriculum differentiation, $F(1, 652) = 63.143$, $p < .001$, $\eta_p^2 = .188$. Primary trainee teachers had a higher positive attitude ($M = 2.93$) towards differentiating the curriculum than did their secondary counterparts ($M = 2.57$). Moreover, the MANOVA for the individual differentiation attitude statements shows that all statements resulted in significant differences (small-medium effect sizes). Primary school trainee teachers had a higher positive attitude towards differentiating the curriculum than their secondary counterparts. The most significant differentiated statements between primary and secondary trainee teachers were statements 8 ($F(1, 652) = 67.703$, $p < .001$, $\eta_p^2 = .192$) and 15 ($F(1, 652) = 59.536$, $p < .001$, $\eta_p^2 = .182$). Primary trainee teachers had a greater positive attitude towards having students work on varied activities, and mixed ability groupings in the class, (statements 8 and 15 respectively), to secondary trainee teachers.

As illustrated, there were no significant differences between male and female trainee teachers' attitudes towards students with SLD ($p > .01$), or attitudes towards curriculum differentiation ($p > .01$).

The preparation of trainee teachers resulted in no significant differences in trainee teachers' attitudes towards students with SLD ($p > .01$). However, significant differences (small-medium effect sizes) were found between those who were nearing the end of their training and those at the beginning in relation to their attitudes towards differentiating the curriculum, $F(1, 652) = 53.507$, $p < .001$, $\eta_p^2 = .164$. Trainee teachers who were nearing the end of their training had a higher positive attitude ($M = 3.00$) towards differentiating the curriculum than trainee teachers who were at the beginning of their training ($M = 2.42$). Moreover, the MANOVA results on the individual differentiation attitude statements show that all of the statements resulted in significant differences between trainee teachers who were nearing the end of their training and those at the beginning. The most significant differentiated statements between trainee teachers at the beginning and those at the end of their training were statements 10 ($F(1, 652) = 57.607$, $p < .001$, $\eta_p^2 = .168$) and 8 ($F(1, 652) = 54.723$, $p < .001$, $\eta_p^2 = .166$). Trainee teachers who were near the end of their training had a greater positive attitude towards having students work on different assignments, and varied activities (statements 10 and 8 respectively), to trainee teachers at the beginning of their training.

As illustrated in Table 1, there were no significant differences between trainee teachers' attitudes and experience or exposure to students with SLD. Thus trainee teachers who had experience and exposure to students with SLD did not significantly differ in their attitudes towards students with SLD or differentiating the curriculum compared to those without any experience or exposure.

Discussion

The trainee stage of a teaching career is seen as an opportune time to intervene and promote more positive attitudes and beliefs about students and practice (Lambe & Bones, 2006; Nes, 2005; Woodcock, Hemmings & Kay, 2012). This study aimed to build a better understanding of the attitudes of trainee teachers at the beginning and end of their training

course as well as differences and similarities between primary school and secondary school, male and female, and experienced and inexperienced to SLD trainee teachers.

Overall, results show that primary trainee teachers had a moderately higher positive attitude to students with SLD than their secondary counterparts. This may have been partly due to inclusion of students with diverse needs and abilities being applied in primary schools to a greater extent than secondary schools. Furthermore, the primary trainee teachers also held a moderately higher positive attitude towards differentiation the curriculum than their secondary school counterparts. Again, this may be partly due to the challenges faced by secondary schools in creating inclusively differentiated schools and classrooms (Shaddock, Giorcelli, & Smith, 2007).

There were no differences found between male and female trainee teachers in this study. Their attitudes towards students with SLD and differentiation remained the same. Previous studies have shown that female trainee and inservice teachers are more positive to inclusion and students with special educational needs (Loreman et al., 2005; Romi & Leyser, 2006; Stella et al., 2007) and have greater tolerance for implementing inclusive education practices (avramidis et al., 2000; Avramidis & Norwich, 2002; Ellis & Porter, 2005). However, this study contrasts previous studies as there were no significant differences found.

The amount of experience that trainee teachers had with students with SLD did not influence their attitude towards them, nor did it have any significant influence on their attitude towards differentiation of the curriculum. This contrasts with previous research, which concludes that the more experience teachers had with students with SLD, the more positive was their attitude (Brown et al., 2008; Hastings et al., 1996; Lambe & Bones, 2006; Sharma et al., 2006; Winter, 2006). However, in these studies the researchers' terms of 'experience' referred to teaching experience, whereas in the present study experience with trainee teachers referred to their life experience, which may explain part of the discrepancy.

The preservice training played a significant part in changing the trainee teachers' attitudes towards differentiation, but did not change their attitude towards students with SLD. Trainee teachers who were nearing the end of their training showed a more positive attitude towards differentiating the curriculum for diverse learners than did those at the beginning of their training. As the focus of many preservice training courses and teaching practices focus on inclusion, this is reflected in the change of attitude towards differentiation. However, the preparation that trainee teachers go through does not change their beliefs and attitudes towards students with SLD.

In summary, trainee teachers with the most positive attitude towards students with SLD were primary trainee teachers. Those with the greatest positive attitude towards differentiation of the curriculum were primary school trainee teachers nearing the end of their training. Conversely, those with the least positive attitude towards students with SLD were secondary school trainee teachers. Those with the least positive attitude towards differentiation of the curriculum were secondary school trainee teachers at the beginning of their training. Thus, future research that focuses on secondary trainee teachers' attitudes, beliefs, and confidence in inclusive education is warranted. Moreover, evaluation of the differences between primary and secondary trainee teachers on the influence of teacher training programs would be a valuable area for future research.

To some extent, the findings in this study support previous research that demonstrated that the more training undertaken by trainee teachers the more likely it is that there would be a decrease in negative attitudes and increase in positive attitudes towards differentiation (Avramidis et al., 2000; Ellis & Porter, 2005; Mungai & Thornburg, 2002). However, the study also provides some support for previous research in that training had only a small influence upon trainee teachers' attitudes (Brown et al., 2008; Stella et al., 2007) as it only influenced their attitude towards differentiation and not towards students with SLD.

Implications

These findings have practical implications for trainee teacher education, professional preparation for others working with students with SLD, and societal issues. These not only reflect the theoretical implications but the broader translation of the implications into classroom practice and the academic arena. In-service teachers are often isolated in the classroom, lacking support for meeting the needs of these students. Unless tertiary institutions prepare future teachers for meeting the needs and having more accurate perceptions, knowledge and expectations about students with SLD, students with SLD may never have their potential fully recognised. This may be especially so for secondary school trainee teachers. By providing more comprehensive teacher training, the needs of students with SLD could begin to be met.

Educators need to understand the impact and relevance that their attitudes and beliefs in students with SLD can play in reinforcing that their ability level is less than those without SLD. If educators can understand the indirect messages that they may send to students with SLD this may then begin to lead to attitudinal changes towards students with SLD. Negative attitudes can have dangerous consequences leading students with SLD to respond and behave accordingly, as demonstrated by Rosenthal and Jacobson (1968), and later by Eccles and Wigfield (1985), who claimed the 'Pygmalion effect' and 'Golem effect' respectively. That is, if these future teachers have the attitude, and belief, that students do not have the ability to succeed, then their behaviour towards the student will be reflected in ways that will, more than likely, bring about future failure. One step towards redressing this situation is for tertiary institutions to better prepare future teachers with the skills, perceptions and knowledge to teach students with SLD. As tertiary institutions are governed by the states' education departments, changes need to be made by policy makers and those within the departments across the states to better recognise and meet the specific needs of these students.

If teacher training institutions are to adopt the responsibility to raise trainee teachers' attitudes towards students with SLD, a common understanding of SLD is essential. As Woodcock & Vialle (2011) indicated, learning disabilities is variously defined across the states and territories of Australia, which may be an impediment to concerted national efforts to improve the attitudes and educational outcomes for students with SLD (DEEWR, 2010). Therefore, an essential first step is to address this discrepancy and work toward a unified understanding of SLD as distinct from the more general 'learning difficulty' term. Policy makers, government, and departments across the states of Australia firstly need to address the concern of SLD being defined and included as 'learning difficulty'. Learning difficulty is an extremely broad term used in many of the states in Australia, and covers many types of students from those with SLD to those in poverty, and those with a moderate intellectual disability (Elkins, 2002). Thus, SLD needs to have a clearly-defined identity so that appropriate beliefs, attitudes and understanding of these students can be achieved. One possibility would be for all states to adopt the current definition of SLD in the Australian Commonwealth Disability Discrimination Act (1992), which describes it as "a disorder or malfunction which results in the person learning differently from a person without the disorder or malfunction" (p. 11). If the states' education departments and government focused more on SLD, trainee teacher preparation providers would more likely accommodate changes to the programs to increase awareness, perceptions and expectations towards students with SLD.

The present study investigated trainee teachers' attitudes towards students with SLD and differentiating the curriculum. Further research could also focus on the influence that attitude towards students with SLD has on instructional strategies (frequency, confidence, and effectiveness). Moreover, future research of a longitudinal nature, focusing on newly

qualified teachers and in-service teachers as they move through their teaching careers, would be useful. This would enable a closer look at the process of professional socialisation in relation to special educational needs.

Further studies in Australia could compare teachers' and trainee teachers' perceptions and expectations of students with SLD. As a final point, the future research studies discussed here could also be carried out cross-nationally to provide comparative data. Given the present Australian government's intention to establish educational consistency at a national level, such a study would be timely.

Limitations of the study

A limitation to the current study was its cross-sectional design. The results should only be considered as a period of time snapshot. There could be variances across different cohorts of trainee teachers that are not reflected in these results, which would be identified in a longitudinal, prospective study. Future studies could employ a prospective design and consider a qualitative approach to gathering data which would tap into the underlying issues in regards to trainee teachers' attitudes and beliefs about students with SLD.

Conclusion

This study has broadened and added to the research base on SLD. The transformation of classrooms with inclusive and diverse classes, and the changing views of teaching all students and meeting everyone's needs represent significant challenges. The development of programs for new teachers to address these emerging challenges in relation to students with SLD is clearly central to the focus of this study. Trainee teachers' perceptions, understandings and expectations of students with SLD need to be guided carefully through their teacher training course and practicum experiences.

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